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(54) Title: GRADUAL MODIFICATION, SUPER-AGONISTS AND ANTAGONISTS OF SIGNAL-PROTEINS AND PEPTIDES

(57) Abstract

Present invention concerns the specific gradual modification of signal proteins and peptides. By a combination of modification with the localization thereof with protease treatment and new forms of mass spectrometry, a very specific modification of the protein or peptide can be achieved. This enables the introduction of a desired change in biological activity, preferably an enhanced activity, an antagonistic activity and/or a cell inhibitory activity. The antagonistic or cell inhibitory activity could be realized by chemical modification, namely an alkylation with specificity for His residues that were localized in or near a catalytic and/or Zinc binding center of human Interleukin-3. One that is skilled in the art can also easily use this invention to generate inhibitors and/or antagonists, preferably by molecular biological modifications, chemical modifications and/or alkylations, preferably by Iodo-Acetate. Preferably these modifications are directed against His residues, other catalytic residues and/or Zinc binding residues. From additional results and data it can be deduced that the invention can also be applied easily on other signal substances. The results can also be well accomplished by DNA-constructs which also includes gene-therapy. Thus the presented methods, obtained substances and the use thereof are embodied in the invention.

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